

Appl. No. 09/770,003
Amendment dated July 27, 2004
Reply to Office action of February 28, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): An optical fiber device comprising:

a housing having a wall, wherein said housing is vacuum drawn and pressurized with a gas to prevent moisture from entering said housing;

an optical fiber holding tube extending through said wall and having a first end and a second end, said first end of said optical fiber holding tube contained in said housing and said second end of said optical fiber holding tube located outside of said housing;

a plurality of optical fibers extending from said first end of said optical fiber holding tube to said second end of said optical fiber holding tube without interruption; and

a gas blocking device attached to said first end of said optical fiber holding tube, wherein said gas blocking device comprises:

a fiber containing body having a passageway, said passageway including a wide portion and a narrow portion, wherein said optical fibers extend through said passageway in said fiber containing body of said gas blocking device; and

a sealing material contained in said passageway and hardened around said optical fibers within said passageway such that said gas blocking device creates a seal substantially preventing gas from passing through said optical fiber holding tube, and wherein said plurality of optical fibers act as strength members that reinforce said sealing material within at least said narrow portion of said passageway.

Claim 2 (Original): The optical fiber device according to claim 1, wherein said gas is nitrogen.

Claim 3 (Original): The optical fiber device according to claim 1, further including a water seal sealing an interface between said wall and said optical fiber holding tube extending through said wall.

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Claim 4 (Currently Amended): The optical fiber device according to claim 1 wherein said gas blocking device includes:

a fiber organizing insert secured within said wide portion of said passageway at one end of said fiber containing body such that said fiber organizing insert is prevented from rotating with respect to said fiber containing body, wherein said fiber organizing insert includes a plurality of fiber receiving holes each receiving respective ones of said plurality of fibers.

Claim 5 (Original): The optical fiber device according to claim 4, further including a locking member securing said fiber organizing insert to said one end of said fiber containing body.

Claim 6 (Currently Amended): The optical fiber device according to claim 4, wherein said passageway in said fiber containing body includes ~~a wide portion, a narrow portion, and a tapered portion between said wide portion and said narrow portion, and wherein said fiber organizing insert is secured within said wide portion.~~

Claim 7 (Original): The optical fiber device according to claim 4, wherein said fiber organizing insert is made of a substantially non-compressible material.

Claim 8 (Original): The optical fiber device according to claim 4, wherein said fiber containing body and said fiber holding tube are made of a conductive metal and are soldered together.

Claim 9 (Previously Presented): The optical fiber device according to claim 1, wherein said sealing material is hot melt glue.

Claims 10-21 (canceled)

Claim 22 (Currently Amended): The optical fiber device according to claim ~~1~~ 21 wherein the ratio of the cross-sectional area of said fibers to the cross-sectional area of said narrow portion is about $\frac{1}{2}$.

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Claim 23 (Previously Presented): A method of passing optical fibers into a pressurized housing, said method comprising the steps of:

- securing a gas blocking device to one end of an optical fiber holding tube;
- inserting a plurality of optical fibers through said optical fiber holding tube and through said gas blocking device;
- injecting a sealing material into said gas blocking device, wherein said sealing material surrounds said optical fibers and hardens such that said optical fibers act as strength members reinforcing said sealing material and such that said material creates a seal substantially preventing gas from passing through said optical fiber holding tube; and
- installing said optical fiber holding tube and said gas blocking device into said housing such that said fibers exit said gas blocking device into said housing.

Claim 24 (Previously Presented): The method of claim 23 wherein the step of injecting said sealing material includes injecting an adhesive.

Claim 25 (Previously Presented): The method of claim 23 wherein the step of injecting said sealing material includes injecting a hot melt glue.

Claim 26 (Previously Presented): The method of claim 23 further comprising the steps of:

- inserting each of said optical fibers through a hole in a fiber organizing insert; and
- securing said fiber organizing insert to said gas blocking device.